Sağlık ve Yaşam Bilimleri Dergisi, Yıl 2024, Cilt 6, Sayı 3, s.119-128
DOI: 10.33308/2687248X.202463347

Article Type Original Research

An examination of the relationship between paternal burnout and father-child interaction

Esra YAZGAN ÖZCAN[a], Şehnaz CEYLAN[b]

ABSTRACT

Objective: This study aims to examine the relationship between burnout levels of fathers with children between the ages of 1 and 3 and father-child interaction. **Method:** Ninety-two volunteer fathers with normally developing children were recruited from the baby section of Karabük town library. Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO) and Parental Burnout Assessment (PBA) were used as measurement tools. In order to implement the PICCOLO scale, fathers' play interactions were videotaped for 10 minutes while they were playing with their children. The videos were then coded by the practitioners. Data were analysed using the SPSS program. **Results:** 53.3% of the participants work in shifts and 63% are in the service sector. When the scores obtained from the PBA scale are checked, it is seen that the fathers participating in the study have low levels of Parental Burnout. When the results of the PICCOLO scale are analyzed, it is seen that fathers' interaction with their children is high. **Conclusion:** As a result of the study, it was found that there was a relationship between the sub-factors determining the burnout status of fathers and the PICCOLO sub-factors. The scores and total scores of fathers from the sensitivity sub-dimension of the PICCOLO scale differ according to the child's gender. It is concluded that the sensitivity and total mean ranks of fathers with male children are higher than the mean ranks of fathers with female children.

Keywords: Father-child relationship, burnout, child

Baba tükenmişliği ve baba-çocuk etkileşimi arasındaki ilişkinin incelenmesi

ÖZET

Amaç: Bu araştırmada, 1-3 yaşları arasında çocuğu olan babaların tükenmişlik düzeyleri ile baba-çocuk etkileşimi arasındaki ilişkinin incelenmesi amaçlanmıştır. **Yöntem**: Normal gelişim gösteren çocuğa sahip 92 gönüllü baba, Karabük halk kütüphanesinin bebek kütüphanesi bölümünde çalışmaya alınmıştır. Araştırmada ölçme aracı olarak, Çocuklarla Ebeveynlik Etkileşimleri: Sonuçlarla Bağlantılı Gözlemlerin Kontrol Listesi (PICCOLO) ve Ebeveyn Tükenmişliği Değerlendirmesi (ETD) kullanılmıştır. PICCOLO ölçeğini uygulamak için babalar çocukları ile oyun oynarken 10 dakika boyunca oyun etkileşimleri videoya alınmıştır. Daha sonra çekilen videolar uygulayıcılar tarafından kodlanmıştır. Veriler SPSS programı kullanılarak analiz edilmiştir. **Bulgular:** Katılımcıların %53.3'ü vardiyalı çalışmaktadır. %63' hizmet sektöründe bulunmaktadır. ETD ölçeğinden alınan puanlar kontrol edildiğinde çalışmaya katılan babaların ebeveyn tükenmişliği seviyelerinin düşük olduğu görülmektedir. PICCOLO ölçeğinin sonuçları incelendiğinde ise babaların çocuklarıyla etkileşiminin yüksek düzeyde olduğunu görülmektedir. **Sonuç:** Araştırma sonucunda, babaların tükenmişlik durumlarını belirleyen alt faktörlerle, PICCOLO alt faktörleri arasında ilişki olduğu bulunmuştur. Babaların PICCOLO ölçeğinin duyarlılık alt boyutundan almış olduğu puanlar ve toplam puanları, çocuğun cinsiyetine göre farklılık göstermektedir. Erkek çocuğu olan babaların duyarlılık ve toplam sıra ortalamalarının kız çocuğu olan babaların sıra ortalamalarından daha büyük olduğu görülmektedir.

Anahtar Sözcükler: Baba-çocuk ilişkisi, tükenmişlik, çocuk

Geliş Tarihi: 28.09.2024 Kabul Tarihi: 22.12.2024

[a]Karabük Üniversitesi, Lisansüstü Eğitim Enstitüsü, Karabük, Türkiye, e-posta: esra.yazgan.33@gmail.com ORCID: 0000-0003-4599-8217
[b]Karabük University, Faculty of Health Sciences, Department of Child Development and Education, Karabük, Turkey, eposta: sehnazceylan@karabuk.edu.tr Orcid: 0000-0001-9313-7353

Sorumlu Yazar/Correspondence: Esra Yazgan Özcan e-posta: esra.yazgan.33@gmail.com

The study was published as a master's thesis at Karabük University.

Atıf/Citation: Yazgan Özcan E, Ceylan Ş. An examination of the relationship between paternal burnout and father-child interaction. *Journal of Health and Life Sciences.* 2024;6(3):119-128.

INTRODUCTION

The quality of positive parent-child interactions has a a profound influence on child development.[1,2] Studies on mother-child interactions are conducted three times more frequently than on fathers.[3] Like mothers, fathers have positive and negative effects on family unity and child well-being. Fatherhood is an important aspect of child development that should not be neglected.[4] However, few studies have focused on father-child interactions in early childhood.[2,5]

Play is an important concept for child education and development. How parents define play, value it, and participate in it are important for early childhood development and parent-child interactions.[3] Playfulness relates to parenting behaviors, the parent's ability to use creativity, imagination, humor, and curiosity during parent-child play interactions.[6]

Infants and young children learn various skills including cognitive, social, emotional, and behavioral skills, in the context of play interactions with caring adults.[7] Warmth father interactions during early childhood support children's cognitive and social development while contributing to academic success.[8] The quality of interaction with fathers determines children's executive functions at age three.[9] Children with high levels of interaction with their fathers have been shown to have higher self-esteem and subjective happiness.[10] The closeness of parenting behaviors supports the development of children's emotional intelligence and creative personality traits.[11] Many data outcomes display that fathers' sensitivity and teaching contribute to children's cognitive and linguistic performance.[12] They also have shown that the play styles of mothers and fathers differ, with fathers tending to engage in more physical, exciting, and rough-and-tumble play, while mothers generally engage in more didactic and restrictive play. This encourages children to develop the skills to take initiative, explore, take risks, and overcome obstacles in unexpected situations.[7] Despite the strong evidence of the impact of fathers on children and mothers, building relationships with fathers is one of the lesser-publicized aspects of parenting interventions.[4] However, most studies have focused on mothers, and much less is known about fathers, particularly when examining specific patterns in which paternal and maternal behaviors are associated with child maladjustment.[7]

Anderson et al. (2013) evaluated emotional closeness, encouragement, sensitivity, teaching, and parental playfulness among quality parenting behaviors. Specific criteria of father-child interaction behaviors include warmth, responsiveness, sensitivity, encouraging exploration, language and cognitive stimulation, and active play.[13] These criteria, which ensure quality interaction, are observed when fathers play with their children and read books to them.[14] Father-child interactions are influenced by sociodemographic factors, the child's temperament and health status, the father's acting skills, and their childhood experiences with their parents.[15] Many factors, such as the personal, social, and cultural characteristics of the fathers, the employment status of the mother, attitudes supporting father involvement, and the temperament and age of the child, can influence the quality of father involvement.[16]

Parental burnout is a context-specific syndrome resulting from sustained exposure to chronic parenting stress, causing parents to feel exhausted because of chronic and overwhelming stress from their parenting role.[17, 18, 19] The BR2 (Between Risk and Resources) model was created to explain parental burnout. According to the BR2 model, parental burnout is caused by a chronic imbalance between demands (risk factors) and resources (protection factors).[18] Parenting demands refer to factors that can significantly increase parenting stress, such as parenting perfectionism, poor parenting habits, low emotional intelligence, and lack of support from family and partner; while parenting resources refer to factors that can significantly reduce parenting stress, such as parenting self-empathy, positive parenting, high emotional intelligence, good parenting habits, having free time, and co-parenting.[20] Ping et al. (2022) concluded that parenting stress and negative parenting styles shown by fathers negatively affected paternal burnout, and burnout increases children's behavioral problems.[21] Considering the effect of stress on parental warmth, sensitivity, and parenting attitudes, it is important to investigate the relationship between parent-child interaction and burnout.[22] Considering that parenting styles in Turkey differ from other countries, researching father burnout and father-child interaction under Turkey's cultural background is of unique value and importance. This study analyzes the relationship between 1-3-year-old children and their fathers through play; paternal burnout is also examined in terms of gender variables.

METHODOLOGY

Research Model

This study aims to examine father-child interaction and paternal burnout in terms of demographic and other variables. The study used the relational survey model using the PICCOLO and Parental Burnout Assessment tools. The relational screening model is used in studies examining connections and relationships.[23] This study has been conducted in the baby section of Karabük town library. According to the calculation made with the formula Nt2pq/d2(N-1)+t2pq based on a 95% confidence interval, it was found that 92 parents were suitable to participate. 92 parents who volunteered participated in the study. The appropriate research sample is applied to the study.[23] The basic criteria for the participants in the study were that the children were

normally developing between the ages of 1-3 and that the parents were literate.

Setting and Timeframe

The research consists of fathers with children between the ages of 1 and 3 in Karabük province between 2022-2023. The study was conducted in the baby section of a public library. The baby section of the public library was chosen because it is a comfortable environment that parents can easily access, is hygienic, and allows for easy observation.

Study Group

The study group consists of parents who want to participate in the thesis study in the baby section of Karabük town library, face to face. Written and verbal permissions were obtained from the participants. Demographic information of the participants is given below (Table 1).

Table 1. The demographic data of the participants

Variable	Category	n	%
Gender of the child	Girl	46	50.0
	Boy	46	50.0
Age of the child	1	26	28.3
	2	45	48.9
	3	21	22.8
Mother's education level**	Elementary	5	5.4
	High school	20	21.7
	University	61	66.3
	Post-graduate	6	6.5
Maternal employment status	Employed	19	20.7
	Unemployed	73	79.3
Father's education level**	Elementary	3	3.3
	High-School	28	30.4
	University	52	56.5
	Post-graduate	9	9.8
Perceived income level***	Low	1	1.1
	Medium	39	42.4
	High	52	56.5
Sibling status*	Only-child	52	56.5
	Having 1	1	1.1
	Having 2	30	32.6
	Having 3	9	9.8
Father's age	24-30	12	13.0
	31-35	52	56.5
	36+	28	30.4
	Shift-based	49	53.3
Shift work status	Not part of a shift-based	43	46.7
Paternal employment class	Service	58	63.0
	Industry	34	37.0
Total		92	100.0

*The categories of having 1 sibling, having 2 siblings, and having 3 siblings were combined and included in the analysis.
** Elementary education was combined with the high school category and graduate education was combined with the university category and included in the analysis.
*** Low and medium categories were combined and included in the analysis.

Table 1 shows that 50% of the children participating in the study were girls (n=46) and 50% were boys (n=46). 28.3% of the children were 1 year old (n=26), 48.9% were 2 years old (n=45) and 22.8% were 3 years old. Among the mothers of the children who participated in the study, 5.4% were elementary school graduates (n=5), 21.7% were high school graduates (n=20), 66.3% were university graduates (n=61), and 6.5% were post-graduate (n=6). While 20.7% of the mothers were working (n=19), 79.3% (n=73) were not working. Of the fathers, 3.3% were elementary school graduates (n=3), 30.4% were high school graduates (n=28), 56.5% were university graduates (n=52) and 9.8% were postgraduate (n=9). 1.1% of the families participating in the study (n=1), 42.4% think that their income is low (n=39), 42.4% think that it is at a medium level (n=39) and 56.5% think that it is at a high level (n=52). Of the children who participated in the study, 56.5% had no siblings (n=52), 1.1% had 1 sibling (n=1), 32.6% had 2 siblings (n=30), and 9.8% had 3 siblings (n=9). Of the children who participated in the study, 76.1% were the first child (n=70), 1.1% were the middle child (n=1) and 22.8% were the last child (n=21). Of the fathers of the children who participated in the study, 13% were between 24 and 30years old (n=12), 56.5% were between 31 and 35 years old (n=52), and 30.4% were 36 years old or older =28).

Data Collection Tools

Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO) and Parental Burnout Assessment Scale (PBA) were used as data collection tools in the study.

Personal Information Form: The personal information form includes information such as the child's age, the child's gender, the father's age, the father's education level, the family's income level, the mother's education level, and the number of siblings.

Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO): PICCOLO was developed by Roggman et al. (2013) to assess the quality of parents' interactions with their children.[24] The Turkish adaptation of the scale was carried out by Bayoğlu, Ünal, Elibol, Karabulut, and Innocenti (2013).[25] Parents are videotaped for 10 minutes while playing with their children. The videos are then coded by the practitioners. The scale consists of four sub-dimensions: emotional closeness, sensitivity, encouragement, and teaching. These behaviors indicate the quality of parent-child interactions.[24]

Parental Burnout Assessment: Roskam et al. (2018) developed a new parenting burnout assessment scale (Parental Burnout Assessment, PBA) using an inductive method based on the definition of parents in a state of burnout.[26] The adaptation studies of the Parental Burnout Assessment scale to Turkish culture were completed by Arıkan, Üstündağ-Budak, Akgün, Mikolajczak, and Roskam (2020).[27] Parental Burnout Assessment (PBA) consists of four sub-dimensions: "emotional exhaustion, emotional distance, the feeling of boredom and contrast with the previous parental self".[27]

Data Collection

Before starting the data collection process for the research, a written application was made to the public library and the necessary permissions were obtained to conduct the study. Additionally, ethics committee approval and informed consent forms from the participants were obtained before the study. For the research, first, parents who were members of the town library's baby section and those who wanted to participate in the study were invited by phone. Families who participated in the study were asked to fill out the "Personal Information Form" and "Parental Burnout Assessment" documents after obtaining parental permission. To evaluate parent-child interaction, a table with different types of toys was prepared. Before the video recording began, an explanation was made: "This space is yours at this time, feel free to play as you wish." At the end of the video recording, families were informed about their performance during the game to increase the quality of game interaction. Therefore, the data collection period lasted approximately one hour. During the video recording, it was observed that fathers generally used a low and monotonous voice tone and did not change their voice tone for the play interaction. When fathers were asked why they spoke in a low voice regarding the tone of voice, the answer was usually "When I speak loudly, my child is afraid, so I hesitate." In addition, regarding the emotional closeness dimension, it was observed that few fathers used the terms "darling, sweetheart, etc.," for interaction. Instead of such words, the words "daughter, son" were generally used in the videos. It is thought that this situation is due to cultural reasons. The data collection process lasted seven months in total. Each video was watched repeatedly at different times to reduce the margin of error while scoring.

Data Analysis

After the completion of the data collection process, the data were transferred to the SPSS program. The overall scales' reliability and sub-dimensions were determined through Cronbach's Alpha Internal Consistency coefficient. To ensure the rater reliability of the PICCOLO scale, 12 of the father-child interaction videos were randomly selected and scored by another rater and the correlation between the two scores was examined. Having established that the inter-rater correlations were high and that the Cronbach's alpha coefficients of the scales were at a sufficient level, the scale scores were tested using the Kolmogorov-Smirnov test to decide which analyses to perform. Since the sample size was greater than 50, the results of the Kolmogorov test were reported and it was found that the scale scores did not show a normal distribution, both according to the categories of variables and in general. The relationship between the scales and the raters' ratings was tested via the Spearman Rank Difference Correlation coefficient. Whether the scale scores showed significant differences according to the variables was tested using the Mann-Whitney U test.

RESULTS

In this section, the analysis findings of the quantitative data collected with the Parent Child Interactions: Observation Checklist (PICCOLO) and the Parental Burnout Assessment scale (PBA) are presented in tables.

According to the descriptive statistics regarding the ETD in Table 2, it is seen that the mean ($\bar{X}$) of the scores obtained by the fathers participating in the study from the emotional exhaustion sub-dimension of the parental burnout scale was 6.96, the standard deviation (SD) was 7.09, and the lowest score obtained from this sub-dimension was 0 and the highest score was 43.

Table 2. Descriptive Statistics for Parental Burnout Assessment and PICCOLO

PBA SUBSCALE	n	X	SS	Min	Max
Emotional Exhaustion (EX)	92	6.96	7.09	0.00	43.00
Contrast with Previous Parental Self (CO)	92	1.91	3.07	0.00	15.00
The feeling of Unfulfillment (FU)	92	1.90	2.81	0.00	17.00
Emotional Distance (ED)	92	2.26	3.14	0.00	18.00
Total Parental Burnout	92	13.04	14.40	0.00	93.00
PICCOLO Subscale	**n**	**X**	**SS**	**Min**	**Max**
Emotional Closeness	92	11.33	1.79	5.00	14.00
Sensitivity	92	13.16	1.60	4.00	14.00
Encouragement	92	12.58	2.09	4.00	14.00
Teaching	92	11.05	3.48	3.00	16.00
Total PICCOLO	92	48.12	7.46	18.00	58.00

The mean ($\bar{X}$) of the scores they received from the contrast with the previous parent self-sub-dimension was 1.91, the standard deviation (SD) was 3.07, and the lowest score received from this sub-dimension was 0 and the highest score was 15. According to the descriptive statistics of ETD in Table 2, the mean ($\bar{X}$) and standard deviation (SD) of the scores of the fathers who participated in the study from the emotional exhaustion sub-dimension of the parental burnout scale were 6.96 and 7.09, respectively. The lowest and highest scores obtained from this sub-dimension were 0 and 43, correspondingly. It can also be observed that the mean ($\bar{X}$) of the scores they received from the feeling of boredom sub-dimension is 1.90, the standard deviation (SD) is 2.81, the lowest score received from this sub-dimension is 0 and the highest score is 17. The average score ($\bar{X}$) for the emotional distance sub-dimension is 2.26, with a standard deviation (SD) of 3.14. The range of scores for this sub-dimension spans from a minimum of 0 to a maximum of 18. The total mean score fathers participating in the study received on the parental burnout scale is 13.04, with a standard deviation of 14.40. The lowest score recorded on the scale is 0, and the highest is 93. When examining the lowest and highest scores obtained from the sub-dimensions of Emotional Tiredness and Distress (ETD), it is observed that the levels of parental burnout among the participating fathers are relatively low.

According to the descriptive statistics regarding PICCOLO in Table 2, the mean ($\bar{X}$) of the scores obtained by the fathers participating in the study from the emotional closeness sub-dimension of the PICCOLO parent-child interaction scale is 11.33, the standard deviation (SD) is 1.79, and the lowest score obtained from this sub-dimension is 5, and the highest score is 14. It is seen that the mean ($\bar{X}$) of the scores they received from the sensitivity sub-dimension is 13.16, the standard deviation (SD) is 1.60, the lowest score received from this sub-dimension is 4, and the highest score is 14. The average score ($\bar{X}$) received from the encouragement sub-dimension is 12.58, the standard deviation (SD) is 2.09, the lowest score received from this sub-dimension is 4, and the highest score is 14. The scores obtained from the teaching sub-dimension have a mean ($\bar{X}$) of 11.05 and a standard deviation (SD) of 3.48, the lowest score obtained from this sub-dimension is 3 and the highest score is 16. The scores obtained from the teaching sub-dimension have a mean ($\bar{X}$) of 11.05 and a standard deviation (SD) of 3.48, the lowest score obtained from this sub-dimension is 3 and the highest score is 16. The total score of the fathers who participated in the study from PICCOLO had an average ($\bar{X}$) of 48.12, a standard deviation (SD) of 7.46, and the lowest score from the overall scale was 18 and the highest score was 58. The fathers who participated in the study had an average of over 11 points in the emotional closeness, sensitivity and encouragement sub-dimensions of the scale, over 9 points in the teaching sub-dimension and over 42 points in the overall scale, indicating that their interaction with their children was at a high level.

Table 3. Findings on the relationship between ETD and PICCOLO

Scale/ Sub-dimension		PICCOLO				
		Emotional Closeness	Sensitivity	Encouragement	Teaching	Total
Parental Burnout dimensions	Emotional Exhaustion (EX)	-.034	.278**	.238*	.305**	.257*
	Contrast with Previous Parental Self (CO)	-.015	.276**	.194	.184	.178
	Feeling of Unfulfillment (FU)	-.033	.184	.089	.177	.118
	Emotional Distance (ED)	-.075	.236*	.166	.130	.108
	Total	-.059	.314**	.242*	.265*	.226*

**p<,01 *p<,05

When Table 3 is examined, there was no significant relationship between the scores that fathers received from the emotional exhaustion sub-dimension of the parental burnout scale and the emotional closeness sub-dimension scores of PICCOLO (p>.05; r=-.034), a low level positive significant relationship with the sensitivity sub-dimension scores (p<.01; r=.278), a low level positive significant relationship with the encouragement sub-dimension scores (p<.05; r=.238), a moderate level positive significant relationship with the teaching sub-dimension scores (p<.01; r=.305), and

a low level positive significant relationship with the PICCOLO total scores (p<.05; r=.257).

Table 3 shows that there was no significant relationship between the scores of fathers from the contrast with the previous parent self-sub-dimension of the parental burnout scale and the emotional closeness sub-dimension scores of PICCOLO (p>.05; r=-.015), a low level positive significant relationship with the sensitivity sub-dimension scores (p<.01; r=.276), a significant relationship with the encouragement sub-dimension scores (p>.05; r=.194), a significant relationship with the teaching sub-dimension scores (p>.05; r=.184), and a significant relationship with the PICCOLO total scores (p>.05; r=.178).

The table scrutinizes that there was no significant relationship between the scores that fathers received from the burnout sub-dimension of the parental burnout scale and the emotional closeness sub-dimension scores of PICCOLO (p>.05; r=-.033), sensitivity sub-dimension (p>.05; r=.184), the encouragement sub-dimension (p>.05; r=.089), the teaching sub-dimension (p>.05; r=.177), and the PICCOLO total score (p>.05; r=.118).

It was concluded that there was no significant relationship between the scores fathers received from the emotional distance sub-dimension of ETD and the emotional closeness sub-dimension scores of PICCOLO (p>.05; r=-.075), a low-level positive significant relationship with the sensitivity sub-dimension scores (p<.05; r=.236), a significant relationship with the encouragement sub-dimension scores (p>.05; r=.166), a significant relationship with the teaching sub-dimension scores (p>.05; r=.130), and a significant relationship with the total scores of the PICCOLO scale (p>.05; r=.108).

The scores that fathers received from the total parental burnout scale are; there was no significant relationship between PICCOLO's emotional closeness subscale scores (p>.05; r=-.059), and a moderate positive significant relationship with its sensitivity subscale scores (p<.01; r=.314). , there is a low-level positive relationship with the encouragement subscale scores (p<.05; r=.242) and a low-level positive relationship with the teaching subscale scores (p<.05; r=.265). It was determined that there was a low-level positive relationship between PICCOLO total scores (p<.05; r=.226).

Table 4. Results of the Mann-Whitney U Test conducted to determine whether the quality of father interaction differs according to the gender of the child

Scale/Sub-dimension	Category	n	Mean rank	Rank Sum	U	Z	P
Emotional Closeness	Girl	46	46.46	2137.00	1056.000	-0.016	0.987
	Boy	46	46.54	2141.00			
Sensitivity	Girl	46	41.28	1899.00	818.000	-2.231	0.026*
	Boy	46	51.72	2379.00			
Encouragement	Girl	46	42.66	1962.50	881.500	-1.475	0.140
	Boy	46	50.34	2315.50			
Teaching	Girl	46	41.30	1900.00	819.000	-1.876	0.061
	Boy	46	51.70	2378.00			
Total PICCOLO	Girl	46	41.01	1886.50	805.500	-1.975	0.048*
	Boy	46	51.99	2391.50			

*p<0.05

According to Table 4, the scores that fathers received from the emotional closeness sub-dimension of the PICCOLO scale [U= 1056.000; z=-0.016; p>0.05], the scores that they received from the encouragement sub-dimension [U= 881.500; z=-1.475; p>0.05], and the scores that they received from the teaching sub-dimension [U= 819.000; z=-1.876; p>0.05] did not show any significant difference according to the gender of their children. The scores that fathers received from the sensitivity sub-dimension of the PICCOLO scale showed a significant difference with a small effect size according to the gender of their children [U= 818.000; z=-2.231; p<0.05; r=0.23].
The mean rank of fathers of boys (51.72) is higher than the mean rank of fathers of girls (41.28). The total scores of fathers on the PICCOLO scale show a significant difference with a small effect size according to the gender of their children [U= 805.500; z=-1.975; p<0.05; r=0.20]. The mean rank of fathers of boys (51.99) is higher than the mean rank of fathers of girls (41.01).

According to Table 5, the scores that fathers received from the emotional exhaustion sub-dimension of ETD [U=982.000; z=-0.595; p>0.05], the scores they received from the contrast with previous parent self-sub-dimension [U=928.000; z=-1.088; p>0.05], the scores they received from the feeling of boredom sub-dimension [U=964.500; z=-0.767; p>0.05], the scores they received from the emotional distance sub-dimension [U=931.000; z=-1.026; p>0.05] and the total scores they received from ETD [U=959.500; z=-0.770; p>0.05] did not show significant differences according to the gender of their children.

Table 5. Results of the Mann Whitney U Test conducted to determine whether paternal burnout differs according to the gender of their children.

Scale/Sub-dimension	Category	N	Rank Mean	Rank Sum	U	Z	P
Emotional Exhaustion (EX)	Girl	46	44.85	2063.00	982.000	-0.595	0.551
	Boy	46	48.15	2215.00			
Contrast with Previous Parental Self (CO)	Girl	46	43.67	2009.00	928.000	-1.088	0.276
	Boy	46	49.33	2269.00			
Feeling of Unfulfillment (FU)	Girl	46	48.53	2232.50	964.500	-0.767	0.442
	Boy	46	44.47	2045.50			
Emotional Distance (ED)	Girl	46	43.74	2012.00	931.000	-1.026	0.304
	Boy	46	49.26	2266.00			
Total Parental Burnout	Girl	46	44.36	2040.50	959.500	-0.770	0.440
	Boy	46	48.64	2237.50			

DISCUSSION

Upon analysis of the research, there was a positive relationship between the "emotional exhaustion" sub-dimension of the parental burnout assessment scale and the sensitivity, encouragement, and teaching dimensions of PICCOLO and the PICCOLO total scores. A positive relationship was found between the "contrast with the previous parental self" and "emotional distance" subscales of the parental burnout scale and the sensitivity subscale of PICCOLO. As indicated by the research results, a positive relationship was found between the fathers' total scores from the ETD and the sensitivity, encouragement, teaching, and PICCOLO total sub-scores.

As the literature suggests, studies have shown that parents' interactions with their children are affected differently according to the parents' psychological state. For example, Cabrera et al. (2009) found that fathers who showed depressive symptoms and reported couple conflict interacted less with their infants. This research suggests that couple conflict does not affect childcare participation for mothers but does affect fathers.[28] Considering that the mothers participating in this study were mostly unemployed (79.3%) and fathers worked shifts (53.3%), it can be concluded that fathers showed less burnout because mothers did more childcare. This result may be related to gender roles and traditional parenting teachings. In addition, it can be thought that the reason why fathers agreed to participate in the study was generally due to the encouragement and insistence of their spouses. Mothers think that their husbands' interaction with their children should be increased in their daily lives and see a need for it. Fathers may have also shown play interaction behaviour more frequently than in their daily lives in an effort to prove themselves when they participated in the study.

Vigouroux et al. (2022) state that parents in the emotional distancing phase experience decreased emotional interactions with children, such as hugging and playing.[29] Another study conducted by Ping et al., (2022) demonstrates that fathers' negative parenting styles and paternal stress reduce the quality of father-child interaction and increase behavioral problems in children.[21] However, fathers who practice positive parenting styles appear to establish good parent-child relationships.[30, 31]

It was observed that none of the sub-dimensions of the burnout scale of the fathers participating in the study affected the "emotional closeness" dimension of PICCOLO. Notwithstanding their fatigue from working most of the day, fathers who took part in the survey said they loved and missed their kids during the day. When reading the questions in the burnout form, it was noted that some of the research participants rated them as "as a father, I cannot feel such things towards my child, this is not possible" and scored them an overall zero. This statement may be due to men expressing their feelings about fatherhood less, as an indicator of gender stereotypes specific to society. In fact, these fathers also stated that they could not participate in childcare due to their shift work. For example, they scored the item "I am so tired from my role as a father that I never get enough sleep" as "never" being sleep deprived because their wives take care of the children at night. This may suggest that low burnout scores do not always mean that the quality of father-child interactions will be high. It may also be thought that fathers experience less burnout because they do not participate enough in childcare.

A relationship was found between the other sub-dimensions of ETD and the sub-dimensions of PICCOLO. It was found that fathers with high levels of "emotional exhaustion" also had high levels of sensitivity, encouragement, and teaching dimensions; fathers with high levels of "contrast with previous parental self" also had high levels of sensitivity sub-dimension; and fathers with high levels of "emotional distance" also had high levels of sensitivity dimension. On the other hand, burned-out fathers are seen to be the ones who pay attention to the sounds their children make or the questions they ask, try to be more involved in the games their children play, and repeat and encourage their children to learn more. Therefore, it can be concluded that burned-out fathers generally

have high sensitivity levels. It can be said that the burnout level is most affected by the "sensitivity" dimension among the PICCOLO sub-factors. As, while the teaching and encouragement dimensions are affected by the fathers' playing skills, the sensitivity dimension is directly affected by the fathers' ability to notice children's interests, emotions, and clues, and to know the child. Fathers' feelings of guilt about the fatigue and negative emotions they feel may suggest that they try to compensate for this feeling by engaging in more play interactions. However, once the behaviors of the fathers participating in this study were evaluated before and after the video shooting, it was seen that fathers with high game interaction scores generally displayed warm behaviors, which reduced this possibility.

According to the research findings, the sensitivity levels of fathers with sons were found to be higher than those of fathers with daughters. According to this finding, studies demonstrate that fathers have more physical play interactions, especially with boys, while playing.[32] Several other studies reveal boys respond more actively to physical play with their fathers than girls.[33] Öztürk and Aksoy (2019) stated that fathers behave more instructively and responsively towards their daughters.[34] As some studies suggest parents' play interaction behaviors are not affected by the child's gender. Nevertheless, the play styles of girls and boys vary. While girls take on more domesticated, female-type roles that require less physical activity, boys play more male-type roles and vocational-type games that require high activity.[35] Many studies show that parental behavior does not change based on the child's gender.[13, 28, 36, 37] While Fliek et al. (2015) have found no difference in physical play with fathers following the gender of the children, they have found mothers played more physical games with their sons.[38]

It is seen that the research results vary by country and parents' gender-specific play behaviors adjust according to cultural characteristics due to the differences in gender-specific expectations and countries' perspectives. The results of this study unveil that fathers' sensitivity levels towards their sons were higher. The reason for these circumstances can be interpreted as fathers having similar gender roles with their sons. That is why they know that the play behaviors that boys like are the same as their own, it can be said that they behave more empathetically. As a result, fathers were found to be more sensitive to the play behaviors of their boys.

Fathers' scores on the emotional exhaustion sub-dimension of the parental burnout scale, scores on the contrast with the previous paternal self-sub-dimension, scores on the feeling of weariness sub-dimension, scores on the emotional distance sub-dimension, and Each participant voluntarily took part in the study. The only limitation is that the participation of volunteer parents and the study was conducted with normally developing children. The children's normal development status was learned based on the scores on the total paternal burnout scale did not differ according to the gender of their children. Guo et al. (2024) claimed that no relationship exists between the child's gender and parental burnout.[39] Other studies also show that gender does not affect parental burnout.[29]

This study has scrutinized that child gender did not affect burnout. Since the children were young and gender-specific behaviors were not evident, it can be thought that gender did not yet have an effect on paternal burnout.

RESULTS

A positive significant relationship was found between the emotional exhaustion sub-dimension of the paternal burnout scale for fathers and the sensitivity, encouragement, and teaching sub-scores and the PICCOLO total score. A significant positive correlation was found between the scores of fathers from the contrast with previous parent self-sub-dimension of the paternal burnout scale and the sensitivity sub-dimension scores of the PICCOLO scale. The scores of fathers from the emotional distance sub-dimension of the parental burnout scale were found to be positively correlated with the sensitivity sub-dimension scores of the PICCOLO scale. A significant relationship was found between the total scores of fathers on the parental burnout scale and the sensitivity, encouragement, and teaching sub-dimensions of the PICCOLO scale and the PICCOLO total scores. The scores of fathers on the sensitivity sub-dimension of the PICCOLO scale and their total scores differ according to the gender of the child. Fathers' scores on the sub-dimensions of paternal burnout do not show significant differences according to the child's gender. Corresponding to the findings of the study, paternal burnout is a condition that negatively affects sensitive parents in many ways. Therefore, it is important for parents experiencing burnout to consult experts when they realize that they are experiencing negative emotions.

Fathers spending time with their children and always being there for them creates positive feelings. However, fatherhood should not be perceived as merely meeting the children's demands or providing for the family financially. Fathers' active participation in childcare and education is important for both the development of parenting skills and the strengthening of father-child interactions. It is recommended that parental leave policies be adjusted so that male employees with children, like women, can increase father-child interactions.

Limitations of the Study

developmental information received from their parents. This study is limited to fathers.

Ethical Approval

Before collecting the data, ethics committee (dated 15.11.2022 and numbered 2022/08-4) and institutional permissions (dated 25.10.2022 and numbered 22976555-700/3070264) were obtained. The data was collected in accordance with the principle of confidentiality and in a way that would not disrupt the workflow.

Author Contributions
Study idea/design: EYÖ, ŞC
Data collection: EYÖ
Data analysis and interpretation: EYÖ, ŞC
Literature review: EYÖ
Writing of the article: EYÖ
Critical review: EYÖ, ŞC
Final approval and accountability: EYÖ

Conflict of Interest: *The authors declare no conflict of interest.*

Financial Support: *The authors declare no financial support.*

REFERENCES

1. Harmandar-Ergül D, Işıkoğlu N. 4-6 yaş çocuğu olan ailelerde akşam yemeği sırasında ebeveyn-çocuk etkileşimi ve teknoloji kullanımı. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*. 2022;(54):1137-57. http://dx.doi.org/10.53444/deubefd.1125840
2. Hall RAS, De Waard IEM, Tooten A, Hoffenkamp HN, Vingerhoets AJJM, Van Bakel HJA. From the father's point of view: How father's representations of the infant impact on father–infant interaction and infant development. *Early Human Development*. 2014;90(12):877-83.
3. Cabrera NJ, Roggman L. Father play:Is it special?. *Infant Mental Health Journal*. 2017;38(6):706-8.
4. Panter-Brick C, Burgess A, Eggerman M, McAllister F, Pruett K, Leckman JF. Practitioner review: engaging fathers–recommendations for a game change in parenting interventions based on a systematic review of the global evidence. *Journal of Child Psychology and Psychiatry*. 2014;55(11):1187-212.
5. Kırman A, Doğan Ö. Anne-baba çocuk ilişkileri: bir meta-sentez çalışması. *Hacettepe University Faculty of Health Sciences Journal*. 2017;4(1):28-49.
6. Lin X, Li H. Parents' play beliefs and engagement in young children's play at home. *European Early Childhood Education Research Journal*. 2018;26(2):161-76.
7. Menashe-Grinberg A, Atzaba-Poria N. Mother–child and father–child play interaction: The importance of parental playfulness as a moderator of the links between parental behavior and child negativity. *Infant Mental Health Journal*. 2017;38(6):772-84.
8. Han S, Ko K. Children's negative emotionality, mothers' depression, and parental warmth in predicting children's school readiness in low-income Korean families: The role of fathers' positive involvement. *Journal of Comparative Family Studies*. 2021;52(3):373-96.
9. Towe-Goodman NR, Willoughby M, Blair C, Gustafsson HC, Mills-Koonce WR, Cox MJ. Fathers' sensitive parenting and the development of early executive functioning. *Journal of Family Psychology*. 2014;28(6):867.
10. Park S, No B. An analysis of latent profiles of father-child interaction: Classification predictors and differences in children's socio-emotional development. *Journal of Comparative Family Studies*. 2021;52(3):424-46.
11. Kim JE, Shin N. Effects of playfulness, play support beliefs and parenting stress on intimate parenting in mothers of young children. *Korean Journal of Human Ecology*. 2014;23(4):571-85.
12. Vilaseca R, Rivero M, Bersabé RM, Cantero MJ, Navarro-Pardo E, Valls-Vidal C, et al. Demographic and parental factors associated with developmental outcomes in children with intellectual disabilities. *Frontiers in Psychology*. 2019;10:872.
13. Anderson S, Roggman LA, Innocenti MS, Cook GA. Dads' parenting interactions with children: Checklist of observations linked to outcomes (PICCOLO-D). *Infant Mental Health Journal*. 2013;34(4):339-51.
14. Cabrera NJ. Father involvement, father-child relationship, and attachment in the early years. *Attachment & Human Development*. 2020;22(1):134-8.
15. Sethna V, Perry E, Domoney J, Iles J, Psychogiou L, Rowbotham NE, et.al. Father–child interactions at 3 months and 24 months: Contributions to children's cognitive development at 24 months. *Infant Mental Health Journal*. 2017;38(3):378-90.
16. Uludağlı NP. Baba katılımında etkili faktörler ve baba katılımının baba, anne ve çocuk açısından yararları. *Türk Psikoloji Yazıları*. 2017:20(39);70-88.
17. Mikolajczak M, Gross JJ, Roskam I. Beyond job burnout: Parental burnout. *Trends in Cognitive Sciences*. 2021;25(5):333-6.
18. Mikolajczak M, Roskam I. A theoretical and clinical framework for parental burnout: The balance between risks and resources (BR2). *Frontiers in psychology*. 2018;9:886. http://dx.doi.org/10.3389/fpsyg.2018.00886
19. Gérain P, Zech E. Does informal caregiving lead to parental burnout? Comparing parents having (or not) children with mental and physical issues. *Frontiers in Psychology*. 2018; 9:884. http://dx.doi.org/10.3389/fpsyg.2018.00884
20. Wang W, Liu X, Wang S, Li Y, Li Y. Personality Traits and Parental Burnout Among Fathers: A Moderated Mediation Model. *Journal of Child and Family Studies*. 2022;32(3):1-11.
21. Ping Y, Wang W, Li Y, Li Y. Fathers' parenting stress, parenting styles and children's problem behavior: The mediating role of parental

burnout. *Current Psychology*. 2022;42(1):1-13. http://dx.doi.org/10.1007/s12144-022-03667-x
22. Schneider M, Falkenberg I, Berger P. Parent-child play and the emergence of externalizing and ınternalizing behavior problems in childhood: a systematic review. *Frontiers in Psychology*. 2022;(13):2175. http://dx.doi.org/10.3389/fpsyg.2022.822394
23. Büyüköztürk Ş, Çakmak-Kılıç E, Erkan-Akgün Ö, Karadeniz Ş, Demirel F. *Eğitimde Bilimsel Araştırma Yöntemleri.* (29. Baskı) Ankara: Pegem Akademi;2020
24. Roggman LA, Cook GA, Innocenti MS, Jump Norman V, Christiansen K. Parenting interactions with children: Checklist of observations linked to outcomes (PICCOLO) in diverse ethnic groups. *Infant Mental Health Journal*. 2013;34(4):290-306.
25. Bayoğlu B, Unal Ö, Elibol F, Karabulut E, Innocenti M S. Turkish validation of the PICCOLO (Parenting interactions with children: checklist of observations linked to outcomes). *Infant Mental Health Journal*. 2013;34(4):330-8.
26. Roskam I, Brianda ME, Mikolajczak M. A step forward in the conceptualization and measurement of parental burnout: The Parental Burnout Assessment (PBA). *Frontiers in Psychology*. 2018;*9*:758. http://dx.doi.org/10.3389/fpsyg.2018.00758
27. Arıkan G, Üstündağ-Budak AM, Akgün E, Mikolajczak M, Roskam I. Validation of the turkish version of the parental burnout assessment (pba). *New Directions for Child and Adolescent Development*. 2020;(174):15-32.
28. Cabrera NJ, Shannon JD, La Taillade JJ. Predictors of coparenting in Mexican American families and links to parenting and child social emotional development. *Infant Mental Health Journal: Official Publication of the World Association for Infant Mental Health*. 2009;30(5):523-48.
29. Vigouroux SL, Charbonnier E, Scola C. Profiles and age-related differences in the expression of the three parental burnout dimensions. *European Journal of Developmental Psychology*. 2022;19(6):885-904.
30. Skinner AT, Gurdal S, Chang L, Oburu P, Tapanya S. Dyadic coping, parental warmth, and adolescent externalizing behavior in four countries. *Journal of Family Issues*. 2022;43(1):237-258.
31. Chen X, Allen JL, Flouri E, Cao X, Hesketh T. Parent-child communication about educational aspirations: experiences of adolescents in rural china. *Journal of Child and Family Studies*. 2023;32:2776-88. http://dx.doi.org/10.1007/s10826-023-02554-8
32. Stgeorge J, Freeman E. Measurement of father–child rough-and-tumble play and its relations to child behavior. *Infant Mental Health Journal*. 2017;38(6):709-25. http://dx.doi.org/10.1002/imhj.21676
33. Paquette D, Dumont C. Is father–child rough-and-tumble play associated with attachment or activation relationships? *Early Child Development and Care*. 2013;183(6):760-73. http://dx.doi.org/10.1080/03004430.2012.723440
34. Öztürk ED, Aksoy AB. Baba ve bebek etkileşim düzeylerinin demografik değişkenler açısından incelenmesi. *IBAD Sosyal Bilimler Dergisi*. 2019;(5):479-496.
35. Marjanovič-Umek L, Fekonja-Peklaj U. The roles of child gender and parental knowledge of child development in parent-child interactive play. *Sex Roles*. 2017;77: 496-509.
36. Sethna V, Perry E, Domoney J, Iles J, Psychogiou L, Rowbotham NE, et.al. Father–child interactions at 3 months and 24 months: Contributions to children's cognitive development at 24 months. *Infant mental health journal*. 2017;38(3):378-90.
37. Oğuz H, Sönmez N. Otizmli çocuğa sahip ailelerde anne-çocuk ve baba-çocuk etkileşiminin incelenmesi. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*. 2018;19(1):55-77.
38. Fliek L, Daemen E, Roelofs J, Muris P. Rough-and-tumble play and other parental factors as correlates of anxiety symptoms in preschool children. *Journal of Child and Family Studies*. 2015;24:2795-804. http://dx.doi.org/10.1007/s10826-014-0083-5
39. Guo X, Hao C, Wang W, Li Y. Parental burnout, negative parenting style, and adolescents' development. *Behavioral Sciences*. 2024;14(3):161. http://dx.doi.org/10.3390/bs14030161